

9700266

<u>THE UNITED STATES OF AMIERICA</u>

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Syngenta Seeds, Inc.

MIPPERS THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED, HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT. VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN DUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY THEREFROM.

SOYBEAN

'S21-A1

In Testimony Mussest, I have hereunto set my hand and caused the seal of the Hant Natisty Protection Office to be affixed at the City of Washington, D.C. this fifteenth day of November, in the year two thousand two.

Moste VI LONGE P

GO of John C

Commissioner Plant Variety Protection Office Agricultural Marketing Service of Agriculture

| U.S. DEPARTMENT OF A LICTURE AGRICULTURAL MARKETING SERVICE | | FORM APPROVED - OMB NO. The following standards are made in accordance with the Priv. 1974 (5 U.S.C. 552a). | | |
|---|--|---|--|--|
| SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse) | | Application is required in order | to determine if a plant variation as | |
| | | Application is required in order to determine if a plant variet certificate is to be issued (7 U.S.C. 2421). Information is held until certificate is issued (7 U.S.C. 2426). | | |
| 1. NAME OF APPLICANTIS) (as it is to appear on the Certificate) | | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER | 3. VARIETY NAME | |
| Synoenta | | | 004 14 | |
| Novartis Seeds, Inc. | | X9621 | S21-A1 | |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and | Country) | 5. TELEPHONE (include area code) | FOR OFFICIAL USE ONL | |
| | | | PVPC NUMBER 7 () | |
| P.O. Box 959 | | 612-593-7333 | f page | |
| Minneapolis, MN 55440 | | 6. PAX µnciude area code) | DATE STATE A 1987 | |
| | and the second of the second s | 612-593-7801 | - X 0 | |
| . GENUS AND SPECIES NAME | 8. FAMILY NAME (Botanic | al; | FILING AND EXAMINATION FEE: | |
| Glycine max | Leguminos | a e | E * 2750 08 | |
| . CROP KIND NAME (Common name) | | | E DATE | |
| Soybean All Home Control And | | | r <i>9-477</i> | |
| D. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGA | NIZATION (corporation, partnershi | o, association, etc.) (Common name) | CERTIFICATION FEE: | |
| Corporation | | TO DATE OF WOODOOD TO | V PATE | |
| 1. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware | | 12. DATE OF INCORPORATION 1976 | E DATE | |
| 3. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO | | | 14. TELEPHONE (include area code) | |
| Tohn C. Thorne Synthis Seeds Inc. P.O. Box 949 Washington, Iowa 52353 | | | 319-653-2181 15. FAX (include area code) 319-653-4609 | |
| P.O. Box 949 | llow instructions on reverse) | | 15. FAX (include area code) | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFOR A. XI Exhibit A. Origin and Brooding History of the Variety | llow instructions on reverse) | | 15. FAX (include area code) | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF OR a. XI Exhibit A. Origin and Brooding History of the Variety b. XI Exhibit 8. Statement of Distinctness | llow instructions on reverse) | | 15. FAX (include area code) | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFOR A. XI Exhibit A. Origin and Brooding History of the Variety | llow instructions on reverse) | | 15. FAX (include area code) | |
| BOOK SEEDS INC. P.O. BOX 949 Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. A. Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership | | | 15. FAX (include area code) 319-653-4609 | |
| BOOK SEEDS INC. P.O. BOX 949 Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. A. XI Exhibit A. Origin and Breeding History of the Variety b. XI Exhibit B. Statement of Distinctness c. XI Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety | ragated varieties verification that tis | | 15. FAX (include area code) 319-653-4609 | |
| BOX 949 Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFOR EACH APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFOR EACH APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFOR EACH APPROPRIATE STATEMENT OF THE Basis of the Applicant's Ownership Each Statement of the Basis of the Applicant's Ownership Each Statement Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or, for tuber propriate Sample 12,600 viable untreated seeds or viable Viable Untreated Sample Sample 12,600 viable Untreated Sample Sampl | ragated varieties verification that tis r of the United States" (Mail to PVI | POI . CLASS OF CERTIFIED SEED? ISee Seci | 16. FAX (include area code) 319 - 653 - 4609 | |
| BOX 949 Washington, Iowa 52353 8. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFORM a. Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample 12,600 viable untreated seeds or, for tuber prop. g. Filing and Examination Fee (\$2,450), made payable to "Treasure" 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOU | regated varieties verification that tists of the United States* (Meil to PV) D BY VARIETY NAME ONLY, AS A NO 81 *no,* go to | POI CLASS OF CERTIFIED SEED? (See Sect to item 201 | 16. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection a | |
| Washington, Iowa 52353 8. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFORM a. **D Exhibit A. Origin and Breeding History of the Variety b. **D Exhibit B. Statement of Distinctness c. **D Exhibit C. Objective Description of the Variety d. **D Exhibit D. Additional Description of the Variety e. **D Exhibit E. Statement of the Basis of the Applicant's Ownership f. **D Voucher Sample 12,500 viable untreated seeds or, for tuber prop. g. **D Filling and Examination Fee (\$2,450), made payable to "Treasure"). COES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUTH THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? **D OES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **D NO** | regated varieties verification that tists of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF | POI CLASS OF CERTIFIED SEED? Use Section item 201 IF "YES" TO ITEM 18, WHICH CLASSE: | 16. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection as 5 OF PRODUCTION BEYOND BREEDER SED | |
| BOX 949 Washington, Iowa 52353 8. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFORM a. Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample 12,600 viable untreated seeds or, for tuber prop. g. Filing and Examination Fee (\$2,450), made payable to "Treasure 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUTHED THE PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED ON THIS PROPLICANT SPECIFY THAT SEED OF THIS PROPLICANT SP | regated varieties verification that tists of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF | POI CLASS OF CERTIFIED SEED? Use Section item 201 IF "YES" TO ITEM 18, WHICH CLASSE: | 16. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection as 5 OF PRODUCTION BEYOND BREEDER SED | |
| Washington, Iowa 52353 8. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFORM a. **D Exhibit A. Origin and Breeding History of the Variety b. **D Exhibit B. Statement of Distinctness c. **D Exhibit C. Objective Description of the Variety d. **D Exhibit D. Additional Description of the Variety e. **D Exhibit E. Statement of the Basis of the Applicant's Ownership f. **D Voucher Sample 12,500 viable untreated seeds or, for tuber prop g. **D Filing and Examination Fee (\$2,450), made payable to "Treasure 7. COES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUNDED THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? **D DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS?** **D YES **If **Yes,** answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENER | regated varieties verification that tist of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF 19. N RELEASED, USED, OFFERED FOR | POI CLASS OF CERTIFIED SEED? Use Section item 201 IF "YES" TO ITEM 18, WHICH CLASSES FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR | 16. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection as 5 of PRODUCTION BEYOND BREEDER SED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Formal Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample (2,600 viable untreated seeds or, for tuber property) g. Filing and Examination Fee (\$2,460), made payable to "Treasure" 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUTH YES (11 "yes," answer items 18 and 19 below) 8. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED FOR STHE APPLICANT SPECIFY THAT SEED OF THIS VARIE | regated varieties verification that tists of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to see the property of the property | CLASS OF CERTIFIED SEED? (See Section item 20) IF "YES" TO ITEM 18, WHICH CLASSES FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR | 16. FAX (include area code) 319-653-4609 and in a public repository) ion 83(a) of the Plant Variety Protection and the Properties of th | |
| Washington, Iowa 52353 8. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IFFORM a. **Exhibit A. Origin and Breeding History of the Variety b. **Exhibit B. Statement of Distinctness c. **Exhibit C. Objective Description of the Variety d. **Exhibit D. Additional Description of the Variety e. **Exhibit E. Statement of the Basis of the Applicant's Ownership f. **Voucher Sample 12,600 viable untreated seeds or, for tuber prope g. **Filing and Examination Fee (\$2,450), made payable to "Treasure 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUNTED THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMINGENERATIONS? **YES III**yes," answer items 18 and 19 below! D. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEE **YES III *yes," give names of countries and dates! 1. The applicant(s) declare that a viable sample of basic seed of the variety of the sample of basic seed of the variety of the sample of basic seed of the variety of the variety of the sample of basic seed of the variety of the sample of basic seed of the variety of the sample of basic seed of the variety of the sample of basic seed of the variety of the variety of the sample of basic seed of the variety of the variety of the sample of basic seed of the variety of the | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF N RELEASED, USED, OFFERED FOR NO will be turnished with application are sited in a public repository and mail | CLASS OF CERTIFIED SEED? (See Section item 20) IF "YES" TO ITEM 18, WHICH CLASSES FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR will be replenished upon request in accontained for the duration of the certificate. Ty, and believe(s) that the variety is new, | 16. FAX (include area code) 319-653-4609 and in a public repository) ion 83(a) of the Plant Variety Protection. GOF PRODUCTION BEYOND BREEDER S RED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Formal Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample (2,600 viable untreated seeds or, for tuber property) g. Filing and Examination Fee (\$2,460), made payable to "Treasure" 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUTH SEED OF THIS VARIETY BE SOUTH SEED OF THIS VARIETY BE SOUTH SEED OF THIS VARIETY BE LIMBED FOR THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED FOR THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED FOR THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMBED FOR THE VARIETY OF A HYBRID PRODUCED FROM THE VARIETY BEED OF THIS VARIETY | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO BT "no," go to ITED AS TO NUMBER OF N RELEASED, USED, OFFERED FOR NO will be furnished with application are sited in a public repository and mail | CLASS OF CERTIFIED SEED? (See Section item 20) IF "YES" TO ITEM 18, WHICH CLASSE: FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR Individual be replenished upon request in accordance for the duration of the certificate. Ity, and believe(s) that the variety is new, etc. | 16. FAX (include area code) 319-653-4609 and in a public repository) ion 83(a) of the Plant Variety Protection. GOF PRODUCTION BEYOND BREEDER S RED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERALIONS? 1. We shibit B. Statement of the Basis of the Applicant's Ownership of the Variety 2. Exhibit E. Statement of the Basis of the Applicant's Ownership of the Variety 3. Voucher Sample (2,600 viable untreated seeds or, for tuber prop of the Variety of the Applicant's Ownership of the Applicant's Ownership of the Applicant's Ownership of the Applicant's Ownership of the Applicant Specify That SEED OF THIS VARIETY BE SOUTHER APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? 2. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? 2. NO 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? 2. YES II "yes," answer items 18 and 19 below! 3. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? 2. YES II "yes," give names of countries and dates! 3. The applicant(s) declare that a viable sample of basic seed of the variety applicable, or for a tuber propagated variety a tissue cuture will be deported to undersigned applicant(s) islare) the owner(s) of this sexually reproduced Section 41, and is entitled to protection under the provisions of Section 4. | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO fit "no," go to ITED AS TO NUMBER OF IS N RELEASED, USED, OFFERED FOR Will be furnished with application are sited in a public repository and mail and or tuber propagated plant variety of the Plant Variety Protection Ac- | CLASS OF CERTIFIED SEED? (See Section item 20) IF "YES" TO ITEM 18, WHICH CLASSE: FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR Individual be replenished upon request in accordance for the duration of the certificate. Ity, and believe(s) that the variety is new, etc. | 16. FAX (include area code) 319-653-4609 and in a public repository) ion 83(a) of the Plant Variety Protection. GOF PRODUCTION BEYOND BREEDER S RED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Formal Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety c. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Overer Sample (2,600 viable untreated seeds or, for tuber prop g. Filing and Examination Fee (\$2,450), made payable to "Treasure YES (11 "Yes," answer items 18 and 19 below) B. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? YES (11 "Yes," answer items 18 and 19 below) C. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEE OF YES (11 "yes," give names of countries and dates) 1. The applicant(s) declare that a viable sample of basic seed of the variety applicable, or for a tuber propagated variety a tissue culture will be deported to the countries of the provisions of Section 41, and is entitled to protection under the provisions of Section 4. Applicant(s) is(are) informed that take representation herein can jeopardize Applicant(s) is(are) informed that take representation herein can jeopardize the countries and the provisions of Section 4: | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF IS. N RELEASED, USED, OFFERED FOR Will be furnished with application as sited in a public repeatory and mail to the Plant Variety Protection As a protection and result in penalties. | CLASS OF CERTIFIED SEED? (See Section item 20) IF "YES" TO ITEM 18, WHICH CLASSE: FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR and will be replenished upon request in accordance for the duration of the certificate. By, and believe(s) that the variety is new, etc. | 15. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection A 5 OF PRODUCTION BEYOND BREEDER S RED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED IF A. CHECK APPROPRIATE BOX VIOLENCE OF THE VARIETY OF THE VARIETY BE SOUTH OF THE STREET OF THE STREET OF THIS VARIETY BE SOUTH OF THE STREET OF THIS VARIETY BE LIMING GENERATIONS? OF HEAPPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMING GENERATIONS? OF HEAPPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMING GENERATIONS? OF HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEED OF THIS VARIETY BE LIMING. OF THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BE LIMING. THE VARIETY BE APPLICANT BOY OF THE VARIETY BE LIMING. THE | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF IS. N RELEASED, USED, OFFERED FOR Will be furnished with application as sited in a public repeatory and mail to the Plant Variety Protection As a protection and result in penalties. | CLASS OF CERTIFIED SEED? (See Section Item 20) IF 'YES' TO ITEM 18, WHICH CLASSE: FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR Individual to replenished upon request in accontained for the duration of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate of the certificate of the certificate. The company of the certificate of | 15. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection A 5 OF PRODUCTION BEYOND BREEDER S RED | |
| Washington, Iowa 52353 B. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Formal Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety c. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Woucher Sample (2,600 viable untreated seeds or, for tuber prop g. Filing and Examination Fee (\$2,450), made payable to "Treasure Yes (11" Yes," answer items 18 and 19 below) B. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOUNT YES (11" Yes," answer items 18 and 19 below) B. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIM GENERATIONS? YES NO D. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEE YES (11" yes," give names of countries and dates) 1. The applicant(s) declare that a viable sample of basic seed of the variety of applicable, or for a tuber propagated variety a tissue culture will be deported to protection under the provisions of Section 4: Applicant(s) is(are) informed that faise representation herein can jeopardiz (IGNATURE) OF APPLICANT (Owner(s)) | r of the United States" (Mail to PV) D BY VARIETY NAME ONLY, AS A NO 81 "no," go to ITED AS TO NUMBER OF IS. N RELEASED, USED, OFFERED FOR NO will be furnished with application as sited in a public repository and mail to the Plant Variety Protection Act or protection and result in penalties. SIGNATURE | CLASS OF CERTIFIED SEED? (See Section Item 20) IF 'YES' TO ITEM 18, WHICH CLASSE: FOUNDATION REGISTER R SALE, OR MARKETED IN THE U.S. OR Individual to replenished upon request in accontained for the duration of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate. The company of the certificate of the certificate of the certificate of the certificate of the certificate. The company of the certificate of | 15. FAX (include area code) 319-653-4609 ned in a public repository) ion 83(a) of the Plant Variety Protection A 5 OF PRODUCTION BEYOND BREEDER S RED | |

EXHIBIT A

Origin and Breeding History of the Variety

The soybean variety 'S21-A1' is derived from a single F6 plant from the cross 'W602548' x 'A2234'. W602548 is an experimental line from the cross 'S 14-60' x 'S 23-12'. The cross was made in the winter of 1989 at the Novartis (formerly Northrup King) Research Center at Waimea, Kauai, Hawaii. The F1 generation was grown at the Novartis Research Center at Washington, Iowa, in the summer of 1989; the F2 and F3 at Waimea, in the winter of 1989-90; and the F4 at Washington the summer of 1990. The F1 was bulk harvested. The F2 and F3 were advanced by harvesting 2-4 seeds per plant and planting 600 seed from the resulting bulk. Individual plants of the F4 population were tested for resistance to Phytophthora megasperma, Race 4, by inoculating detached cotyledons with the fungus. Each resistant plant was harvested and threshed individually. The seed from each of these resistant plants were planted in a plant progeny row at Washington in 1991. One of these, numbered W116264, was selected based on early Group 2 maturity and agronomic characteristics for further testing. This line was subsequently tested under the temporary designation X9621 and named S21-A1. It has been tested at several northern combelt locations in the U.S. and in Ontario from 1992 through 1996 and found to yield well compared to other early Group 2 varieties. Descriptive characteristics including purple flowers, gray pubescence, tan pods, and imperfect black hilum (may contain up to 2% other hilum) have been identified and confirmed. S21-A1 has been tested in the field for iron deficiency chlorosis and found to be susceptible. It has been tested for reaction to Races 1, 3, 4, and 7 of Phytophthora sojae using hypocotyl inoculation of greenhouse grown plants and found to carry the Rps1-k gene for resistance.

In the winter of 1993-94, 200 seeds of S21-A1 were planted at Waimea. The increase was rogued for flower and pubescence color and 100 single plants were harvested and threshed individually. The progeny from these plants were planted at Washington in the summer of 1994. This increase was carefully rogued at flowering and maturity. Uniform rows which conformed to the variety description were bulked to produce Pedigree Seed. This seed was planted near Washington, IA in 1995 to produce Breeder Seed. The increase block was rogued carefully during flowering and at maturity and found to be uniform.

Foundation Seed of S21-A1 was produced in 1996 from the 1995 Breeder Seed. The Iowa Crop Improvement Association inspected the fields and found them to meet the standards for Foundation Seed.

S21-A1 is stable and uniform within a purity level of 99% (98% for hilum color) except for seed coat peroxidase reaction. Seed coat peroxidase is 95% low (+ or - 5%) and 5% high (+ or - 5%). Over four years of testing and three cycles of seed increase, we have observed no variants. Any off-type plants removed from increase fields were assumed to have arisen from admixture or outcrossing. Varietal purity will be maintained using progeny rows as described previously as needed for the life of the variety.

EXHIBIT B

Novelty Statement for the Variety

S21-A1 is most similar to A2396. It can be differentiated from A2396 on the basis of pod color and reaction to Race 3 of Phytophthora megasperma. S21-A1 has tan pods and is resistant to Race 3; A2396 has brown pods and is susceptible to Race 3.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY

| so | YBEAN (Glycine max L.) | • |
|--|--|--|
| NAME OF APPLICANT(S) Syngenta (Bris/3/02) Novertie Seeds, Inc. | TEMPORARY DESIGNATION X9621 | S21-A1 |
| ADDRESS (Street and No., or R.F.D. No., City, State, and 2 | Tip Code) | FOR OFFICIAL USE ONLY |
| P.O. Box 959 Minneapolis, MN 55440 | | 9700266 |
| Choose the appropriate response which characterizes to in your answer is fewer than the number of boxes pro | the variety in the features described vided, place a zero in the first box | below. When the number of significant digits when number is 9 or less (e.g., 0 9). |
| 1. SEED SHAPE: | | |
| 2 L L L L L L L L L | T T 2 = Spherical Flattene | d (L/W ratio > 1.2; L/T ratio = < 1.2) d (L/T ratio > 1.2; T/W > 1.2) |
| 2. SEED COAT COLOR: (Mature Seed) | | |
| 1 = Yellow 2 = Green 3 = Brown | 4 = Black 5 = Othe | r (Specify) |
| 3. SEED COAT LUSTER: (Mature Hand Shelled Seed) | | |
| 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny | ('Nebsoy'; 'Gasoy 17') | |
| 4. SEED SIZE: (Mature Seed) | | |
| 1 6 Grams per 100 seeds | | |
| 5. HILUM COLOR: (Mature Seed) | | |
| 5 1 = Buff 2 = Yellow 3 = Brown | 4 = Gray 5 = Imperfect i | Black 6 = Black 7 = Other (Specify) |
| 6. COTYLEDON COLOR: (Mature Seed) | | |
| 1 = Yellow 2 = Green | | |
| 7. SEED PROTEIN PEROXIDASE ACTIVITY: | OF#/ T () | E%) |
| 1 = Low 2 = High | 95% low (+ or 5% high (+ o | r - 5%) |
| B. SEED PROTEIN ELECTROPHORETIC BAND: | | |
| 1 = Type A (SP1 ^a) 2 = Type 8 (| SP1 ^b) | |
| 9. HYPOCOTYL COLOR: | | |
| 1 = Green only ('Evans'; 'Davis') 2 = G 3 = Light Purple below cotyledons ('Beeson'; 'Pick 4 = Dark Purple extending to unifoliate leaves ('Ho | reen with bronze band below cotyledor lett 71') odgson'; 'Coker Hampton 266A') | s ('Woodworth'; 'Tracy') |
| 10. LEAFLET SHAPE: | | |
| 3 1 = Lanceolate 2 = Oval 3 | = Ovate 4 = Other (Specify)_ | N. A. W. W. |

| 11. LEAFLET SIZE: | | | 9700266 |
|---|---|--|---------------------------------------|
| 1 = Small ('Amsoy 71'; 'A5312') 3 = Large ('Crawford'; 'Tracy') | 2 = Medium ('Corsoy 79'; 'Gasoy 17') | | |
| 12. LEAF COLOR: 1 = Light Green ('Weber'; 'York') | 2 = Medium Green ('Corsoy 79'; 'Brextor | 29 20 21 25 21 25 | |
| 2 3 = Dark Green ('Gnome': 'Tracy') | - Ti | | |
| 13. FLOWER COLOR: 2 1 = White 2 = Purple | 3 = White with purple throat | | |
| 14. POD COLOR: 1 = Tan 2 = Brown | 3 = Black | | |
| 15. PLANT PUBESCENCE COLOR: 1 1 = Gray 2 = Brown (Tawny) | | | |
| 16: PLANT TYPES: 1 = Slender ('Essex'; 'Amsoy 71') 3 = Bushy ('Gnome'; 'Govan') | 2 = Intermediate ('Amcor'; 'Braxton') | | |
| 17. PLANT HABIT: 1 = Determinate ('Gnome'; 'Braxton') 3 = Indeterminate ('Nebsoy'; 'Improved | 2 × Semi-Determinate ('Will') Pelican') | | |
| 18. MATURITY GROUP: 1 = 000 | | 7 = 1V 8 = V | · · · · · · · · · · · · · · · · · · · |
| 19. DISEASE REACTION: (Enter 0 = Not Tested; BACTERIAL DISEASES: | 1 = Susceptible; 2 = Resistant) | | |
| Bacterial Pustule (Xanthomonas phaseo 1 Bacterial Blight (Pseudomonas glycinea) Wildfire (Pseudomonas tabaci) | | | |
| FUNGAL DISEASES: 1 Brown Spot (Septoria glycines) | | 370026 | |
| Frogeye Leaf Spot (Cercospora sojina) Race 1 Race 2 Target Spot (Corynespora cassiicola) | Race 3 Race 4 Race 5 | Other (Specify) | |
| Downy Mildew (Peronospora trifoliorur Powdery Mildew (Microsphaera diffusa) | | , | × |
| Brown Stem Rot (Cephalosporium gregorium Stem Canker (Diaporthe phaseolorum v | atum) | ٠ | |

| 9. DISEA | SE REACTION: | (Enter 0 = Not Te | sted; 1 = Susceptible; 2 = Re | esistent) (Continued) | | • | | | |
|-------------------|---|----------------------------|---------------------------------------|--|--|---------------|--|--|--|
| FUN | IGAL DISEASES: | (Continued) | | | | | | | |
| | Pod and Stem Blight (Diaporthe phaseolorum var; sojae) | | | | | | | | |
| 1 | Purple Seed Sta | sin <i>(Cercospora kik</i> | uchii) | | | | | | |
| | Rhizoctonia Ro | oot Rot (<i>Rhizoctor</i> | nia solani) | | | | | | |
| | Phytophthora F | Rot (Phytophthora | megasperma var. sojae) | | | | | | |
| 2 | Race 1 | Race 2 | 2 Race 3 2 | Race 4 Race 5 | Race 6 2 R | ace 7 | | | |
| $\overline{\Box}$ | Race 8 | Race 9 | Other (Specify) | | · | | | | |
| VIR. | AL DISEASES: | | | | | | | | |
| | | bacco Ringspot Vi | -us) | | | | | | |
| | | (Bean Yellow Mos | | | | | | | |
| H | | | | | | | | | |
| | | (Cowpea Chloroti | | | | | | | |
| | Pod Mottle (Be | an Pod Mottle Viru | 12) | | | | | | |
| | Seed Mottle (So | oybean Mosaic Vire | ıs) | | | | | | |
| NEM | ATODE DISEAS | ES: | | | | | | | |
| | Soybean Cyst Nematode (Heterodera glycines) | | | | | | | | |
| | Race 1 | Race 2 | Race 3 | Race 4 Other (Sc | pacify) | | | | |
| | Lance Nematod | de (Hoplolaimus Co | olombus) | | | | | | |
| | Southern Root | Knot Nematode (| Meloidogyne incognita) | | | | | | |
| | Northern Root | Knot Nematode (/ | Meloidogyne Hapla) | | | | | | |
| | Peanut Root Kr | not Nematode (<i>Me</i> | loidogyne arenaria) | | | | | | |
| | Reniform Nema | atode (<i>Rotylenchu</i> | lus reniformis) | | | | | | |
| | | ASE NOT ON FOR | : | | · . | | | | |
| | OTHER DISEA | 43E 1401 014 1 071 | ivi jopetny/. | | | | | | |
| O, PHYSI | OLOGICAL RES | PONSES: (Enter (|) = Not Tested; 1 = Suscept | ible; 2 = Resistant) | n de la Maria de Maria. La companya de la c | | | | |
| 1 | fron Chiorosis o | on Calcareous Soil | | | | | | | |
| | Other (Specify) |) | 1000 | | | | | | |
| INCEC | | | | and the second of the second o | | | | | |
| 21. 114320 | | | | | | | | | |
| | | | | and the same | | | | | |
| <u> </u> | Potato Leaf Hopper (Empoasca fabae) | | | | | | | | |
| | Other (Specify, | <i></i> | · · · · · · · · · · · · · · · · · · · | | | | | | |
| 22. INDIC | ATE WHICH VA | RIETY MOST CLO | OSELY RESEMBLES THA | T SUBMITTED. | | | | | |
| СНА | RACTER | NAMI | OF VARIETY | CHARACTER | NAME OF VARIE | TY | | | |
| Plant S | Shape | A22 | 42 | Seed Coat Luster | S14-60 | | | | |
| Leaf S | hape | A23 | 96 | Seed Size | S24-92 | | | | |
| Leaf C | Leaf Color \$23-12 Seed Shape A2234 | | | | | | | | |
| Leaf S | ize | A22 | 42 | Seedling Pigmentation | \$20-91 | <u> </u> | | | |
| | | _ | | | | <u>algase</u> | | | |

FORM LMGS-470-57 (2-82)

Page 3 of 4

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

| 25 OVE DATE OF THE STATE OF THE COMPARISON DATE | | | | | | 710020 | | | |
|---|--------------|------------------|-------------|---------------------|-------|---------|----------------|--------------------|---------------|
| VARIETY DAYS L | DAYS | PLANT LODGING | CM PLANT | LEAFLET SIZE SEED C | | SEED CO | NTENT | SEED SIZE G/100 | NO. SEEDS/ |
| | SCORE HEIGHT | CM Width | CM Length | % Protein | % Oil | SEEDS | POD | | |
| Submitted | 126 | 3.3 | 75 | 6 | 10 | 39,7 | <u>-2</u> 22.3 | 16.2 | |
| A2242 Name of Similar Variety | 130 | 3.1 | 77 | 6 | 10 | 38⊋6 | 24.7 | 13.3 | |

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

- 1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
- 2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
- 3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
- 4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

| REPRODUCE LOCALLY. Include form number and date on all reproductions. | FORM APPROVED - OM8 N | | | | |
|---|---|--|--|--|--|
| U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP | Application is required in order to certificate is to be issued (7 U.S.C. | The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential | | | |
| 1. NAME OF APPLICANT(S) (BT: 5/3/02) Syngenta. Nevartis Seeds, Inc. | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER \$\tilde{5}3\frac{1}{2}\$\$ \$\tilde{5}2\frac{1}{2}\$\$ | 3. VARIETY NAME S21-A1 | | | |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) | 5. TELEPHONE (include area code) | 6. FAX linckede area codel | | | |
| P.O. Box 959 Minneapolis, MN 55440 | 612-593-7333 | 612-593-7801 | | | |
| mamoupolito, im corro | 9700 | 1266 | | | |
| 8. Does the applicant own all rights to the variety? Mark an "X" in appropriate in | block. If no, please explain. | X YES NO | | | |
| | | · | | | |
| 9. Is the applicant (individual or company) a U.S. national or U.S. based company If no, give name of country | • | YES NO | | | |
| 10. Is the applicant the original breeder? If no, please answer the following: a. If original rights to variety were owned by individual(s): | 9 April 4 (2 April 4 1) 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | YES NO | | | |
| b. If original breeder(s) a U.S. national(s)? If no, give name of co | | YES NO | | | |
| 11. Additional explantion on ownership (If needed, use reverse for extra space): | | | | | |
| PLEASE NOTE: Plant variety protection can be afforded only to owners (not licensees) who meet of | and of the following aritaria: | | | | |
| If the rights to the variety are owned by the original breeder, that person must of a country which affords similar protection to nationals of the U.S. for the sa | t be a U.S. national, national of a l | UPOV member country, or national | | | |
| If the rights to the variety are owned by the company which employed the orig nationals of a UPOV member country, or owned by nationals of a country which genus and species. | | | | | |
| 3. If the applicant is an owner who is not the original breeder, both the original br | eeder and the applicant must mee | t one of the above criteria. | | | |
| The original breeder may be the individual or company who directed final breed definition. | ding. See Section 41(a)(2) of th | ne Plant Variety Protection Act for | | | |

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-1327 (voice) or (202) 720-1127 (TDD). USDA is an equal

Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, Send comments regarding this burden estimate or any other espect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7830, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

employment opportunity employer.